

PATENT SPECIFICATION

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(54) A COMPOSITION FOR AND A PROCESS THEREWITH OF TREATING THE HAIR AND/OR SCALPS OF ANIMALS

(71) I, FRITZ SYKORA, of 294 Blackmoorfoot Road, Crosland Moor, Huddersfield in the County of York, a British subject, do hereby declare the invention, for which I pray that a patent may be granted to me and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 The present invention relates to new or improved compositions which are capable of stimulating the growth of hair and/or modifying the texture of hair and/or stimulating the condition of the scalp.

15 Countless proposals have been made and adopted for controlling the growth of hair and, more particularly, for retarding hair loss and stimulating its restoration in man, such proposals including electrical massage, digital massage, the application of nutrient materials and solutions, etc., but it is fair to say that no universally efficacious treatment has yet been evolved.

20 Many of the established treatments are satisfactory in promoting the restoration of hair following specific illnesses, but no wholly satisfactory solution has been provided for combating the loss of hair so very often associated with advancing senility.

30 The growth, condition, and pigmentation of the hair is very largely influenced by the state of a person's nerves, there being certain nervous conditions which cause a premature exhaustion of the scalp with the result that the growth of hair ceases altogether. It is generally accepted that continual excessive mental strain, worry, or insomnia may lead to a stoppage of hair growth. It has been observed, though to a lesser extent, that a sudden shock caused, for example, by being involved in an accident, or the discovery of a tragedy, can be responsible for partial or total hair loss accompanied in many cases by a stoppage

of any further growth. It is also generally accepted that continual excessive mental strain, worry or shock may produce alterations in the pigmentation of the hair, the commonest alteration being that of 'greying' of the hair. Hair loss may also be caused by the condition of the scalp.

The term given to hair loss, whether it be a slight thinning or complete baldness, is 'ALOPECIA'.

It is an object of the present invention to provide new compositions which are capable of stimulating hair growth, or restoring hair growth, or stimulating the pigmentation and condition of the hair, or stimulating the condition of the scalp, or any combination of the aforesaid objectives.

A further object of the invention is to provide a novel composition which can be applied as a liquid without any elaborate associated massage.

According to the invention, a composition capable of stimulating hair growth and/or stimulating the condition of the scalp includes pantothenic acid and jaborandi and/or capsicum all admixed with a non-irritant solvent.

Preferably, the non-irritant solvent is isopropyl-alcohol or industrial methylated spirits. It is preferred that the non-irritant solvent is diluted by the addition of soft or distilled water. A perfume agent such as rose-water, may be contained in the composition. It is further preferred that the composition contains acetic acid.

It is further preferred that a scalp stimulant, such as a menthol extract, be contained in the composition. Brazilian menthol may be used as the menthol extract.

The substances used in the preparation of the examples of the composition to be described hereinafter are as follows:—

ISOPROPYL ALCOHOL is a colourless

mobile fluid made by (a) from acetone by reduction with sodium amalgam, (b) by catalytic hydrogenation or (c) by reaction of sulphuric acid with propylene of petroleum gases and subsequent hydrolysis. It is a non-irritant solvent and is used as a cleanser of the scalp.

PANTOTHENIC ACID which is normally a viscous oil, may be formed as a white crystalline powder and is a growth factor for certain micro-organisms and acts as a vitamin. It is known as a hair growth stimulant.

DISTILLED WATER is a relatively soft and purified water, having undergone distillation.

JABORANDI.—This is a tincture of the dried leaves of *Pilocarpus microphyllus*, which is a shrub indigenous to Brazil. Jaborandi has a stimulant action for hair growth, although it is inevitable to the scalp.

CAPSICUM.—This is a tincture of the

EXAMPLE 1

ISOPROPYL ALCOHOL

DISTILLED WATER

CAPSICUM

JABORANDI

PANTOTHENIC ACID

ROSE-WATER

BRAZILIAN MENTHOL B.P.

This composition is made by firstly mixing the capsicum, pantothenic acid powder and jaborandi together and leaving the mixture for about twenty four hours. After twenty three hours from the mixing of the capsicum, pantothenic acid and jaborandi the isopropyl alcohol is mixed with the distilled water, the latter diluting the former, this mixture being left for approximately one hour. The irritant effects of the jaborandi are substantially reduced or completely eliminated when the com-

EXAMPLE 2.

ISOPROPYL ALCOHOL

DISTILLED WATER

CAPSICUM

JABORANDI

PANTOTHENIC ACID

ROSE-WATER

BRAZILIAN MENTHOL B.P.

This composition is made in a similar fashion to EXAMPLE 1, excepting that the Brazilian menthol crystals are dissolved in

EXAMPLE 3.

ISOPROPYL ALCOHOL

DISTILLED WATER

ACETIC ACID

CAPSICUM

JABORANDI

PANTOTHENIC ACID

ROSE-WATER

BRAZILIAN MENTHOL B.P.

dried ripe fruit of *capsium fastigiatum*, which is a small shrub native to Southern India. This is a hair growth stimulant.

ACETIC ACID is an acid prepared by the oxidation of alcohol or fermentation of alcoholic liquids. It is used as a cleaner in conjunction with isopropyl alcohol.

ROSE-WATER is water possessing oils obtained from rose petals after the latter have been exposed in or to the water. It serves as perfume agent to hide the odours of other chemicals.

MENTHOL.—Brazilian Crystals is a colourless crystalline substance isolated from Japanese Peppermint Oil. It is a conditioner for the scalp.

HYDROXYBENZOATE B.P.C. is a solvent which gives vitality and body to the composition when prepared.

Compositions of matter in accordance with the present invention will now be illustrated by way of the following examples:—

(Relative quantities).

1,000 millilitre.

600 millilitre.

300 millilitre.

350 millilitre.

120 grams.

100 millilitre.

80 grams.

position is prepared. After the twenty four hours half the quantity of rose-water is mixed with the capsicum/pantothenic acid/jaborandi mixture and the other half is mixed with the isopropyl alcohol/distilled water mixture. Both mixtures are then left for about two hours, after which they are mixed together and well stirred. They are then left for five days, being stirred occasionally during this time. After five days, the mixture, or composition as it then is, can be decanted and bottled.

(Relative quantities).

1,000 millilitre.

600 millilitre.

300 millilitre.

350 millilitre.

120 grams.

100 millilitre.

80 grams.

the isopropyl alcohol prior to the latter being mixed with the distilled water.

(Relative quantities).

1,000 millilitre.

650 millilitre.

10 millilitre.

175 millilitre.

350 millilitre.

40 grams

150 millilitre

80 grams.

This composition is made in a similar fashion to EXAMPLE 1, excepting that the acetic acid is mixed with the isopropyl al-

cohol prior to the latter being mixed with the distilled water.

EXAMPLE 4.

ISOPROPYL ALCOHOL

DISTILLED WATER

(OR SOFT WATER)

JABORANDI

PANTOTHENIC ACID

HYDROXYBENZOATE B.P.C.

ROSE-WATER

BRAZILIAN MENTHOL B.P.

(Relative quantities).

600 millilitre.

400 millilitre.

300 millilitre.

100 grams.

10 grams.

100 millilitre.

80 grams.

15 The composition is prepared by mixing 60% of alcohol to 40% of soft or distilled water and then leaving the mixture to stand for at least 12 hours, whereupon the jaborandi is added and the whole is left to stand for a further 24 hours to allow sediment to settle. The pantothenic acid is next added to the mixture and it has been found that best results are obtained by adding half the required amount of pantothenic acid and leaving the mixture for 48 hours before adding the remaining half. The mixture is then left for a further 72 hours before it is tested for stability. If it is found that the mixture has become stable and the composition has become clear, then slightly more jaborandi is added and the mixture is stirred vigorously and left for 24 hours. Hydroxybenzoate B.P.C. is added to give the mixture body and vitality. The rose-water (or alternatively orange water) is then added and again the mixture is stirred vigorously, this rose-water giving the mixture a perfume. The menthol, which acts as a cleanser, is next added to the mixture and then it is left to stand for 48 to 72 hours. After such a time the mixture is vigorously agitated and then left to stand for a week whereupon the mixture is sampled and tested for a 'body'. Following a further standing of one week the mixture is ready for use.

This composition is thought to be stable for an indefinite period.

The methods of treatment with such compositions are relatively important and such factors as duration of application of composition, working temperature, frequency of applications may vary with individual cases.

55 The following are general methods of use for certain conditions.

METHOD 1. In cases of rapid hair loss, which is often noticed when brushing the hair, it has been found that oil which is brought to the surface of the scalp by the hair itself reacts with a fatty matter secreted by the sebaceous glands to form a mixture which blocks the vents through which the hair grows. This blocking causes an obstruction and the hair breaks off at the vent, the latter being eventually completely blocked by the mixture. After a

long period of such blockage the hair root itself may die.

A preparation such as that described in EXAMPLE 1 might be used in this case in order to clean the scalp and stimulate hair growth. In the application of the composition, about $\frac{1}{2}$ oz. is massaged vigorously into the scalp for above five minutes. The head is then covered with a towel for about fifteen minutes. After shampooing, a further $\frac{1}{2}$ oz. of the composition is massaged into the scalp and the hair is then left to dry without washing or rinsing the composition away. This treatment should be undertaken about once a week.

METHOD 2. This method is applicable to cases of SEBORRHOEA. The meaning of the word seborrhoea is an over-flowing of the sebaceous matter, the disease having various names according to its pathological variations. It is a disorder of the fat glands which produce an increase in and an alteration of the secretion from the sebaceous glands which forms an oily, waxy, or scaly accumulation of matter on the surface of the scalp. SEBORRHOEA SICCA relates to the production of the waxy and scaly forms, it being very common and the chief cause of premature baldness. SEBORRHOEA ECZEMAFORMIS is a disease which is undetected and causes gradual thinning of the hair. It may often result in inflammation of the scalp accompanied by an abundance of flaky and fatty scales.

These fatty substances (pelletised dandruff) block the hair vents and eventually the hair breaks off and the root may die.

In such cases the important point in treatment is to cleanse the scalp and the composition of EXAMPLE 3 is thought to be the best for this task. Before application, the hair should be shampooed, and then $\frac{1}{2}$ oz. of the composition can be massaged into the wet scalp for about ten minutes. Then a further $\frac{1}{2}$ oz. of the composition should be massaged into the scalp, followed by covering the head with a hot towel for about five minutes. After the five minutes another hot towel is placed on the head for a similar period. The hair can now be dried. Such application should be repeated twice weekly, unless the disease is

serious, the treatment being repeated four times weekly in the latter case.

METHOD 3. This method is applicable in cases of ALOPECIA caused by a nervous complaint. In such cases the supply of food by the nerves to the hair root ceases and as a result the roots cease to function and the hair eventually drops out. To treat such cases a stimulant for the scalp and nerves is required, the composition of EXAMPLE 2 and EXAMPLE 4 providing this stimulant.

$\frac{1}{2}$ oz. to $\frac{1}{4}$ oz. of the composition is massaged vigorously into the scalp for about five minutes and then the head is covered with a hot towel for a further ten minutes. This procedure is repeated once and then the hair is shampooed. A further $\frac{1}{4}$ oz. of the composition is massaged into the wet scalp and then the hair is dried without rinsing the final application out of the hair. This procedure should be repeated daily.

In all treatments of this kind it is vital that the hair roots do not die and it is therefore necessary to act as early as possible.

In each of the examples of compositions described herein, diluted isopropyl alcohol is used, but it is possible to employ diluted industrial methylated spirits in each case as a substitution to diluted isopropyl alcohol.

In cases of alopecia which have been treated with a composition in accordance with this invention, it has been observed that a few weeks after commencement of the treatment portions of scalp which had

lost hair were beginning to yield a 'down'-like hair.

WHAT I CLAIM IS:—

1. A composition capable of stimulating hair growth and/or stimulating the condition of the scalp which includes pantothenic acid and jaborandi and/or capsicum oil admixed with a non-irritant solvent.

2. A composition as claimed in Claim 1, wherein the non-irritant solvent is isopropyl alcohol or industrial methylated spirits.

3. A composition as claimed in Claim 2, wherein the non-irritant solvent is diluted with either distilled water or soft water.

4. A composition as claimed in any one of Claims 1 to 3, which further includes a perfume agent.

5. A composition as claimed in Claim 4, wherein the perfume agent is either rose-water or orange-water.

6. A composition as claimed in any one of the preceding claims, which further includes a scalp stimulant.

7. A composition as claimed in Claim 6, wherein the scalp stimulant is a menthol extract, such as Brazilian menthol.

8. A composition as claimed in Claim 1, prepared substantially as herein described in any one of Examples 1, 2, 3 and 4.

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